

Amendments to the Specification

[0017] FIG. 2A is an enlarged cross-sectional, exploded assembly view taken along line 2A-2A of FIG. 1.

[0018] FIG. 2B is a cross-sectional view along line 2B-2B of FIG. 1.

[0019] FIG. 2C is a cross-sectional view taken along line 2C-2C of FIG. 1.

[0020] FIG. 2D is a cross-sectional view taken along line 2D-2D of FIG. 1.

[0021] FIG. 2E is an enlarged cross-sectional view of an alternate embodiment of the hollow container of the present invention taken along line 2A-2A of FIG. 1.

[0025] FIG. 4A is an enlarged cross-sectional exploded assembly view of a third alternate embodiment of the hollow container of the present invention taken along line 2A-2A of FIG. 1.

[0026] FIG. 4B is an enlarged cross-sectional view of the embodiment shown in FIG. 4A taken along line 2B-2B of FIG. 1.

[0035] FIG. 11 is a perspective, cross-sectional view of the invention in FIG. 10 taken along line ~~A-A~~ 11-11 of FIG. 10.

[0049] Referring now to FIG. 2A, an exploded view of the construction of sole 102, taken along line 2A-2A of FIG. 1, sole 102 comprises a foot plate 202, a hollow sole 204 in each of forefoot portion 106 and heel portion 108 as described above, and an outsole 206. As seen in FIG. 1, hollow sole 204 preferably does not extend the entire length of sole 102, but is divided into forefoot portion 106 and heel portion 108. Alternative arrangements are possible, however, as would be apparent to one of ordinary skill in the art. Hollow sole 204 could extend under arch area 132 either connected to or disconnected from one or both of forefoot portion 106 and heel portion 108 in alternative embodiments. Foot plate 202 is preferably made from a hard thermoplastic material which is injection molded into the desired shape. In the alternative, foot plate 202 can be thermoformed, compression molded, or vacuum formed in a conventional manner. Foot plate 202 allows for connection of sole 102 to a conventional shoe upper.

[0055] Referring now to FIG. 2B, a cross-sectional view of sole 102 taken along line 2B-2B of FIG. 1, fluid connector 116 is formed where rising wall 124 and falling wall 126 do not extend to top component 210. In the area of fluid connection 116, rising wall 124 and falling wall 126 are shorter than those in the area of discontinuous weld line 114, leaving a gap between bottom component 208 and top component 210 for the fluid to flow between exterior compartment 110 and interior compartment 112.

[0056] Referring now to FIG. 2C, a cross-sectional view of sole 102 taken along line 2C-2C of FIG. 1, discontinuous weld line 114 joins bottom component 208 to top component 210 at only one location, such that interior compartment 112 is not present in this location.

[0057] Referring now to FIG. 2D, a cross-sectional view of sole 102 taken along line 2D-2D of FIG. 1, as discussed above, forefoot component 106 and heel component 108 are similarly constructed, except with respect to the size and shape of each component. Accordingly, forefoot component 106 also comprises a footplate 202, a hollow sole 204, and an outsole 206. Top component 210 is joined with bottom component 208 around a flat circumference 118 of bottom component 208. Discontinuous weld line 114 is formed such that part of bottom component 208 is sealed to flat portion 212 of top component 210. Fluid connector 116 is formed where rising wall 124 and falling wall 126 do not extend to flat portion 212 of top component 210.

[0059] An alternate configuration for outsole 206 is described in reference to FIG. 2E, a cross-sectional view of an alternate embodiment of sole 102 taken along line 2A-2A of FIG. 1, as described above. This configuration is also shown in FIG. 3C, a bottom plan view of heel portion 108. In this embodiment, outsole 206 is a single, solid piece of material, adhered to the entire bottom surface of bottom component 208. As shown in FIG. 2E, this creates pockets 225 formed from rising wall 124, falling wall 126, and outsole 206. This closing of the open space formed by rising wall 124 and falling wall 126 provides additional stability to the shoe. In this embodiment, hollow sole 204 is not visible from a bottom, exterior view of the shoe, but only, potentially, from a side view.

[0062] In a preferred embodiment, at least one of outer wall 214, rising wall 124 and falling wall 126 are not straight. Instead, theses walls have flexible ridges (as shown

in FIGS. 4A and 4B) such that the walls are capable of compressing when pressure is applied. FIG. 4A shows the walls of this preferred embodiment in an exploded cross section along line 2A-2A of FIG. 1. FIG. 4A shows the ridges of outer wall 214, rising wall 124 and falling wall 126 of the present invention.

[0084] FIGS. 10, ~~and 12~~ and 13 show similar structures; however, with the core being made from two pieces of material having different densities 1015A[[,]]/1015B, ~~and 1215A[[,]]/1215B~~ and 1315A/1315B. Again, the preferred material of the core is foam. The fluid system functions as described above. Referring to FIG. 10, heelstrike foam 1015A is slightly softer than medial foam 1015B. For example, heelstrike foam 1015A may be PU or EVA with a rating of 51.+-.3 on the Asker C scale, while medial foam may be PU or EVA with a rating of 57.+-.3 on the Asker C scale. The embodiment shown in FIG. 10 has a fluid system similar to that of the embodiment shown in FIG. 8. Core 1015A, disposed within a hollow container 1010, defines a first compartment 1002A similar in shape to that of compartment 802 and foam 1015B defines a second such compartment 1002B. These compartments are fluidly connected by a fluid conduit 1011. The foams in ~~FIG.~~ FIGs. 12 and 13 may have similar characteristics, although the fluid ~~system~~ systems disposed therein ~~is~~ are similar to that described above with respect to the embodiment shown in FIG. 9. This variation in the densities of the two foams provide additional posting to prevent the foot from over-pronation.